



## NUTRITION AND DIETARY PATTERN OF THARUS OF UDHAM SINGH NAGAR

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As far as Tharus are concerned being primarily peasant class they store wheat and rice in sufficient quantity for their utilization. They usually take Roti, Dal and vegetables in Lunch and Rice, Vegetables in Dinner. In breakfast they prefer roti and tea. Most of the Tharus don't have milk thus tea is usually black in color. It seems that the habit of taking tea is a recent development among tharus when they started communicating with the outside world. According to Doctor Badri Datt Pandey writer of famous book on history of Kumaun, "Tharus are carefree people who love liquor meat, fish, egg, chicken and Pork. Pork is the favorite meet of Tharus and it is also easily and cheaply available"<sup>1</sup>. Tharus are fond of milk and curd. If they take milk that milk is preferred of Buffalo. The use of oil, chilly, onion and garlic is prevalent among tharus. It is normal for a tharus house hold of six member family to consume one- two kgs of red chilli per month.

If we study the table of dietary pattern of tharus it is clear that the diet of most tharus include besides cereal, tubers, pulses and non-veg. With the decline of production in pulses in U.S. Nagar<sup>2</sup>, the quantity of this ingredient in diet has also gone down. As green leafy vegetables are available in seasons and it is never a regular feature of their diet.

On the basis of dietary pattern, I will attempt to show the deviation from consumption in terms of energy measured in Kilo Calories, Proteins, Iron, fat, Calcium and Carbohydrates. Energy which our body needs the most for its function is required even when the body is at rest or even when we are at sleep. Proteins, Fat and carbohydrates are mainly the energy yielding components of a diet. Proteins normally supply 10-12 percent of energy in most diets; energy that carbohydrates and fat

<sup>1</sup> Pandey, Badridutt. : "History of Kumaun", Shayam parakashan, Almora Book Depot, Almora (U.P.)Pg.3-19

<sup>2</sup> Udam Singh Nagar Statistical Patrika (1998). Pg 40-41

contributes may vary from diet to diet. It is desirable that the energy from fat should not exceed 30 percent and the rest may be derived from carbohydrates.

**Fats:** Fat is a necessary ingredient in the diet. It is a constant source of energy and supplies per unit weight more than double the energy furnished by either protein or carbohydrates. Presence of fats in diet is important for the absorption of fat-soluble vitamins like vitamin A and carotene present in the diet. Deficiency of some of the fatty acids causes some problems in the skin. Fat of diets is of two kinds, the visible and invisible fats. The visible fats are those derived from animal fats like butter, 'ghee' and vegetable fats like groundnut, mustard, coconut, and safflower and till. The invisible fats are present in the food items like cereals, pulses, oilseeds, milk, egg, meat etc. the se invisible fats are believed to contribute significantly to the total fat and essential fatty acids contents of diet. In this paper the estimation of fats by expenditure group includes both the types of fat.

**Carbohydrates:** Like fats carbohydrates are also a source of energy. They include glucose, cane sugar, milk-sugar, starch etc. Table 6 and Appendix table 3 which shows per capita carbohydrates consumption by monthly per capita expenditure class reveals that of the total 399 grams of carbohydrates of the rural areas, 83 percent are from cereals, 3.4 percent from pulses and the remaining 13.6 percent from the other food items.

**Proteins:** Proteins are one of the most important nutrients. They help to develop our body and make good the wear and tear of tissues which is a constant feature of the life process. So the deficiency of proteins in the diet will hamper the development of our body.

Pulses, which is the richest source of protein, is consumes more or less in the same amount in the both areas (Table 4). Meat, fish and eggs are consumed more in the urban sector and account for only 25 percent of protein from total food. So it is the cereals which contain less protein but are consumed more which provide 70 percent of protein to the rural people and 62 percent to the urban people.

**Iron:** Iron, which comes under the category of mineral salt, is an important constituent of food. Its deficiency causes anemia, a condition in which the hemoglobin content of blood is low. More than 2 billion people principally women and children are iron deficient. WHO estimation suggests that 51 percent of children under age of four in developing countries are anemic [UNICEF 1998]<sup>3</sup>. The daily recommended iron per capita is 28 mg. Green leafy vegetables are rich in iron and inclusion of these items in the daily diet meets a considerable portion of iron requirement. Of the cereals, grains, millet, especially 'bajra' and 'ragi' are good source of iron.

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<sup>3</sup> United Nations Children's Fund (1998): The State of world's Children, Oxford University Press. New York.pg 43

**Calcium:** Like iron, calcium is also a mineral salt. Bones and teeth are made up principally of calcium salt and hence calcium is mainly required as a building material for strong bones and teeth. Various functions of the body also require calcium. Milk is rich source of calcium. Green leafy vegetables like fenugreek, amaranth and drumstick leaves are rich in calcium. Most cereals contain some amount of this element and the millet 'ragi' is a particularly rich source of calcium.

The above listed minerals are important ingredients of any diet. However as stated earlier the diet of tharus are primarily cereal based. It is this diet which needs improvement. Table 5.1 gives the diet of an adult as found in the diet survey, and the nutrient composition of the diet.

**Table 5.1: Composition of an average diet and its approximate nutritive value**

SL. No.	Foods	Amount (Gms)	Nutrients	Amount
1	cereals	540	Protein	57 gms
2	Pulses	12	Fats	24gms
3	Leafy Vegetables	7	Carbohydrate	490 gms
4	Roots and Tubers	7	Calories	2400
5	Other Vegetables	85	Calcium	360mg
6	Milk	80	Iron	24mg
7	Meat, Fish & Egg	5	Vitamin A Value	340µg
8	Oils and Fats	15	Thiamine	.7mg
9	Sugar & Jaggery	13	Riboflavin	.6mg
10	Fruits	5		

It is apparent that this diet is insufficient in many respects. It fails to supply the nutrients in many respects. It fails to supply the nutrients in the required amounts and thus is ill balanced. The nutritive value has been calculated on the assumption that the cereal intake is composed of a mixture of cereals. However it is common Knowledge that in most families only a single cereal is consumed. Further, though items like leafy vegetables and flesh foods and fruits are listed in the average diet given above, very few families consume these or the consumption may be occasional. If we take these facts into consideration, the nutritive value of the diet consumed in a good number of families constituting a majority of the population will be much worse than what is shown above.

An improvement is possible in this diet in almost every category of food stuff. If means allow, the quantities of food stuffs given for well- balanced diets would be the best substitute. But it will be realized that items like milk, fruits and flesh foods are expensive and beyond the means of many. In these circumstances the question of cost should be borne in mind while attempting any improvement in the diet. Further, with increasing population in the country, the production of certain foods (especially the foods which supply vitamins, proteins and minerals) has not kept pace

with our needs and hence it may be necessary to plan only such improvements as may be attainable in the immediate future. The broad lines on which diets of groups of persons can be improved are (a) introduction of second cereal or mixed cereal diet ( the substitution of even a part of the staple cereal, viz. rice or wheat by millets like ragi or bajara serves to provide a diet with better nutritive value at practically no extra cost, or even cheaper): (b) increased intake of pulses wherever feasible: (c) increased use of green leafy vegetables in the diet and (d) introduction of cheap flesh foods, two to three times a week, if possible.

The composition of an improved diet is suggested in the following table 5.2. The nutritive value of this diet is considerably superior to that of the average Tharu diet and it involves only marginal extra cost. In devising the diet, some practical considerations such as the availability of different foods in the area have been taken into account.

**Table 5.2: Composition of an improved diet and its approximate nutritive value**

SL. No.	Foods	Amount (Gms)	Nutrients	Amount
1	cereals	200	Protein	66 gms
2	Millets	200	Fats	50gms
3	Pulses	70	Carbohydrate	430 gms
4	Leafy Vegetables	100	Calories	2430
5	Other Vegetables	85	Calcium	.8gm
6	Fruits	57	Phosphorus	1.4 gms
7	Milk	170	Iron	40mg
8	Sugar & Jaggery	57	Vitamin A Value	960µg
4	Vegetable oils	28	Vitamine B <sub>1</sub>	1.8mg
5	Meat, fish & Egg	28	Vitamine C	200mg

Well balanced diets are in general more expensive than deficient ones. The typical average diet shown in the above table 5.2 is largely composed of cereals and less of other foods. The well balanced diet richer in milk and other foods may cost twice as much or even more.

Other Points to which attention should be given include the following. If the cereal consumed is milled rice, an improvement in the nutritive value of the diet (and in the health of those consuming it) can be brought about by wholly or partially substituting the milled rice by undermilled or parboiled rice, whole wheat, or one of the millets, particularly ragi. If milled rice remains the basis of diet, it should be realized that the milled rice eater needs more protective foods such as pulses, milk, green leafy vegetables, fruits, etc, than does the consumer of whole wheat or ragi. When the diet is almost wholly composed of rice and when people are so poor that they cannot afford to buy other

foods except occasionally in small quantities, then the state in which the rice is eaten is of paramount importance. Parboiled rice, even when milled, is superior in nutritive value (Particularly in the anti-beriberi vitamin) to raw rice milled to same degree.